

FIG. 1

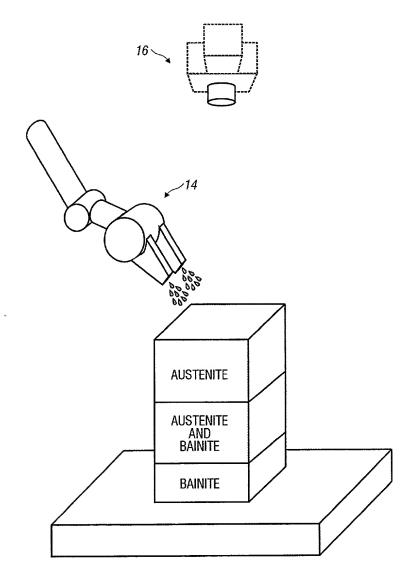


FIG. 1A

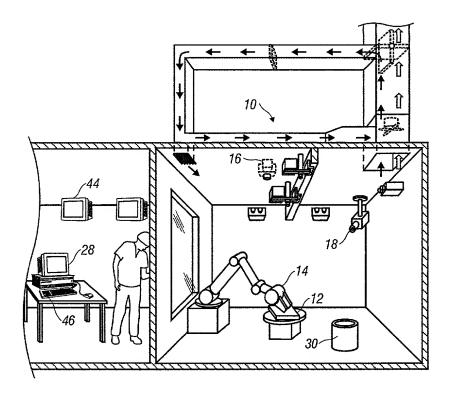
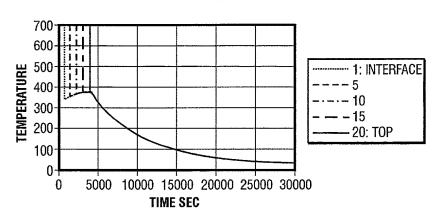
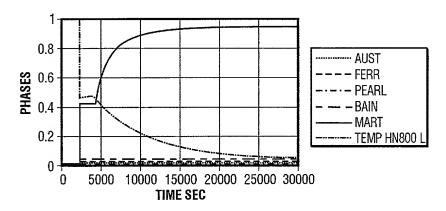


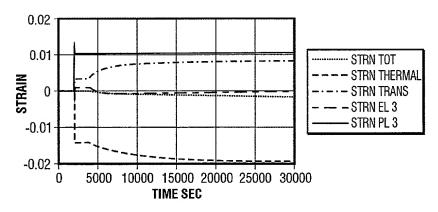
FIG. 2



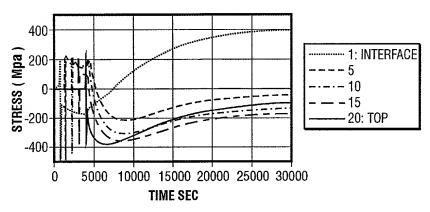
Temperature FIG. 3



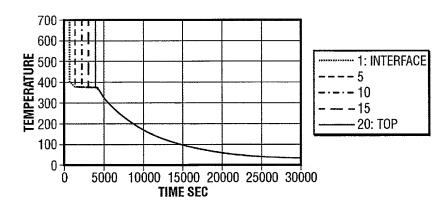
Phases, Position #10 FIG. 4



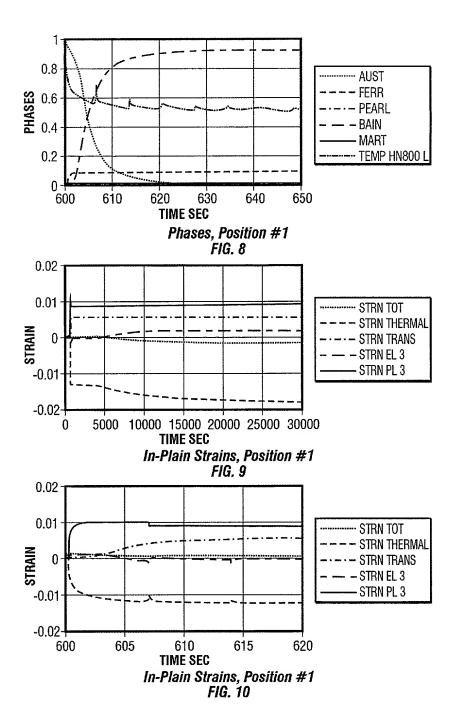
In-Plain Strains, Position #10 FIG. 5

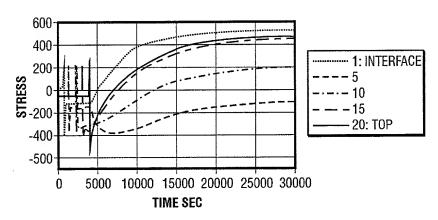


In-Plane Stress FIG. 6

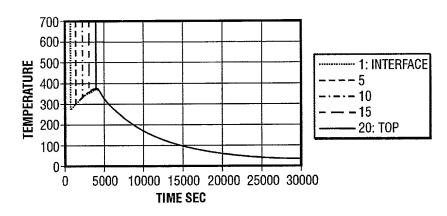


Temperature FIG. 7

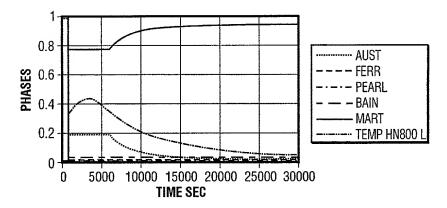




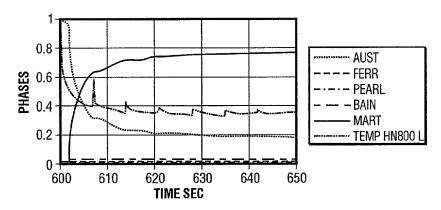
In-Plane Stress FIG. 11



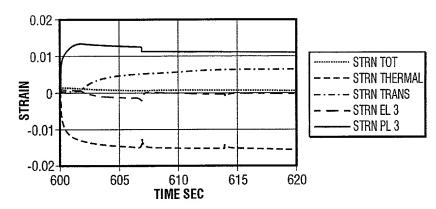
Temperature FIG. 12



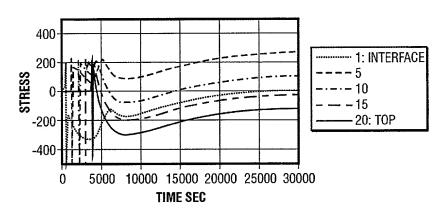
Phases, Position #1 FIG. 13



Phases, Position #1 FIG. 14



In-Plain Strains, Position #1 FIG. 15



In-Plane Stress FIG. 16

WARPAGE IN 0.001 INCH FOR STEADY-STATE TEMP = 280° C 3.0 2.8 -0.03 2.7-2.6 -0.02 -0,016 -0.024 -0.012 2.5 -0.018 2.4 0.016 2.3 2.2-2.1-2.0-1.9-1.8--0.034 0.03 -0.026 -0.014 -0.02 -0.016 1.7 1.6 1.5 1.4-1.3 -0.026 1.2 -0.024 -0.016 -0.02 1.1 -0.018 -0.016 1.0 | 325 365 335 340 345 350 360 375 330 355 370

FIG. 17

POST TEMPERATURE (C°)

WARPAGE IN 0.001 INCH FOR STEADY-STATE TEMP = 320° C 3.0 2.9 2.8 2.7 -0.004 -0.02 0.016 2.6 -0.01 -0.006 -0.014 -0.002 2.5 -0.008 2.4 0.006 2.3 2.2 2.1 2.1 2.0 1.9 1.8 1.8 -0.004 2.0 10.02 0.016 -0.004 -0.014 -0.01 -0.006 -0.008 1.7 1.6 1.5 1.4 1.3 1.2 -0.006 1.1 0.008 -0.006

FIG. 18

340

0 345 350 355 3 Post temperature (C°)

360

365

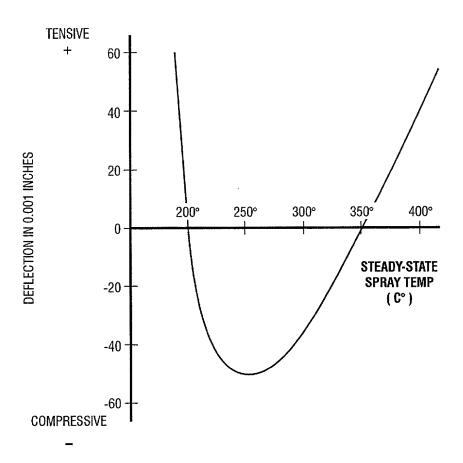
370

375

1.0 L\ 325

330

335



WARPAGE (OUT OF FLATNESS) OF SPRAYED METALLIC PLATE VS. STEADY STATE SPRAY TEMPERATURE FIG. 19